REMARKS

Claims 1, 2, 6-22 and 24-26 are all of the claims presently pending in the application. The claims have not been amended by the present Response.

Entry of this Response is believed proper since no new issues have been raised which would require further consideration and/or search.

Applicant appreciates the Examiner's indication that claims 8, 10, 11, 18, and 20 would be allowable if rewritten in proper independent form. Applicant submits, however, that all of claims 1-2, 6-22 and 24-26 are allowable over the cited prior art references.

Claims 1, 2, 6, 7, 9, 12-17, 19, 21, 22 and 24-26 stand rejected under 35 U.S.C. § 102(b) as being anticipated by, or in the alternative under 35 U.S.C.§ 103(a) as obvious over Tadatomo (Jpn. J. Appl. Phys., Vol. 40, pp. L583-L585, Part 2 No. 6B, "High Output Power InGaN Ultraviolet Light-Emitting Diodes Fabricated on Patterned Substrates Using Metalorganic Vapor Phase Epitaxy", 15 June 2001).

This rejection is respectfully traversed in the following discussion.

I. THE CLAIMED INVENTION

The claimed invention (e.g., as defined by exemplary claim 1) is directed to a III group nitride system compound semiconductor light emitting element. The light emitting element includes a transparent substrate, a III group nitride system compound semiconductor formed on a surface of the transparent substrate and a convex light trapping member that is formed over the surface of the transparent substrate. An interface is provided between the light trapping member and the transparent substrate (e.g., see Application at page 9, lines 27-29 and Figures 1B to 1F, 2, 3, and 5A).

II. THE PRIOR ART REFERENCE

The Examiner alleges that Tadatomo teaches the claimed invention of claims 1, 2, 6, 7, 9, 12-17, 19, 21, 22 and 24-26. Applicant submits, however, that there are elements of the claimed invention which are neither taught nor suggested (nor made obvious) by Tadatomo.

That is, Tadatomo (described on pages 2-3 of the Application) does not teach or

suggest "*wherein there is provided an interface between the light trapping member and the transparent substrate*", as recited in independent claim 1, and similarly in independent claims 6 and 22.

The Examiner asserts that Tadatomo teaches sapphire, which he indicates is aluminum oxide (specifically Al_2O_3). He asserts that Tadatomo shows a sapphire substrate with "convex" projections (allegedly convex light trapping members) upon which is grown a GaN based light-emitting member.

Nowhere does Tadatomo teach or suggest that the convex light trapping member wherein there is provided an interface between the light trapping member and the transparent substrate. Indeed, Tadamato merely teaches a sapphire substrate including grooves formed in the substrate.

Tadatomo discloses that a "patterned sapphire substrate (PSS)" is fabricated by photolithography and reactive ion etching (RIE), and that, as the result of the fabrication, the PSS is provided with ridges and grooves (see Tadatomo at page 2, fifth paragraph).

However, the PSS of Tadatomo is not provided with an interface between the ridge and the sapphire substrate. Namely, it is impossible for the PSS to have such an interface since the ridge of the PSS is formed by patterning the surface of the sapphire substrate by etching, i.e., the ridge continues in material from the substrate body. In contrast, the invention includes an interface formed as a result of the light trapping member being laminated on the sapphire substrate.

As compared to the device of the claimed invention, the PSS of Tadatomo exhibits a disadvantage. That is, the Application teaches that "sapphire, which is commonly used as transparent substrate material, is difficult to process since it is hard and fragile. In other words, it limits the degree of freedom in forming the uneven pattern on the surface" (see Application at page 3, lines 13-16).

It is apparent that the claimed invention is not anticipated by Tadatomo since Tadatomo fails to disclose that there is an interface provided between the light trapping member and the transparent substrate.

The Examiner alleges that "[t]he new limitations in the claims do not structurally

distinguish over Tadatomo because there are no specific limitations regarding the "interface" between the substrate and "light trapping member" to distinctly distinguish over Tadamato". Further, the Examiner alleges Tadamato has "the same resultant structure produced by a different method" (see Office Action dated September 18, 2005 at page 2). The Examiner, however, is clearly incorrect.

Applicant points out that the Examiner must consider the plain meaning of the claim language as well as the plain meaning of the prior art reference. In this instance, the plain meaning of the claim language recites that "an interface is provided between the light trapping member and the transparent substrate", while, in contrast, the plain meaning of Tadatomo teaches a sapphire substrate having grooves integrally formed therein. Therefore, the resultant structure of Tadatomo is not the same as that of the claimed invention.

Furthermore, Applicant points out that no specific limitations regarding the limitation of the interface are required in the claims. That is, Applicant has amended the claims to recite a structural feature (i.e., an interface), which is not shown in the applied prior art reference. The burden is now on the Examiner to provide a reference that teaches an "interface" between the light trapping member and the substrate, as recited in the claimed invention. There is no requirement for Applicant to further narrow the structure of the "interface" until the Examiner provides a reference teaching or suggest an interface between the light trapping member and the substrate.

The Examiner does not allege that Tadatomo teaches or suggests a structural interface between the patterned substrate and the ridges in the substrate. The Examiner merely alleges that there is an "atomic" interface between the substrate and the ridge structures of Tadatomo. However, the Examiner provides no support for this allegation in Tadatomo.

Indeed, Tadatomo clearly teaches a patterned substrate having ridges integrally formed in the substrate. The ridges and the substrate are a single, integral layer of sapphire. Therefore, there is clearly no atomic interface (or any other type of interface) between the ridges and the remaining portion of the substrate. However, if the Examiner wishes to maintain this rejection, Applicant respectfully request the Examiner to point out where Tadatomo teaches or suggests an atomic interface (or any other type of interface) between the

sapphire substrate and the ridges integrally patterned therein.

Moreover, the Examiner alleges that "a mere "line" in a drawing connoting some demarcation or "interface" does not per se structurally distinguish the claims over Tadatomo where a line can also be arbitrarily drawn across the ridges to delineate the base level of the grooves across the sapphire substrate" (see Office Action dated September 18, 2005 at page 3). The Examiner, however, is clearly incorrect.

While a line in a drawing, alone, may not provide support for an interface between the light trapping member and the substrate, the drawings in view of the teachings of the specification, clearly provide for support for the claim limitation. As previously indicated , the Application discloses that the light trapping member (2) is laminated on the sapphire substrate (1) (see Application at page 9, lines 27-29). It is well known to those skilled in the art that, when one member is laminated on another member, a certain interface exists between the two members. Thus, the word "laminated" means that there is an interface between the sapphire substrate (1) and the light trapping member (2).

Still further, the Application discloses that the light trapping member is formed independently of the substrate (see Application at page 5, lines 14-16). Thus, the word "independently" also teaches that there is an interface between the sapphire substrate (1) and the light trapping member (2).

Therefore, Applicant submits that there are elements of the claimed invention that are not taught or suggested (nor made obvious) by Tadatomo. Therefore, the Examiner is respectfully requested to withdraw this rejection.

IV. FORMAL MATTERS AND CONCLUSION

In view of the foregoing, Applicant submits that claims 1, 2, 6-22 and 24-26, all of the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed

below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Respectfully Submitted,

Date: October 26, 2005

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I hereby certify that I am filing this paper via facsimile, to Group Art Unit 2815, at (571) 273-8300, on October 26, 2005.

Respectfully Submitted,

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